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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/663,964      | 09/19/2000  | William R. Babbitt   | 5922-56160          | 5387             |

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| EXAMINER |
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JUBA JR, JOHN

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| ART UNIT | PAPER NUMBER |
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2872

DATE MAILED: 11/29/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/663,964             | BABBITT ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | John Juba              | 2872                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 September 2000.
- 2a) This action is **FINAL**.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 27-44 and 52-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 27- 44 and 52-54 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 September 2000 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ .                                   |

***Information Disclosure***

The numerous non-patent publications cited throughout the specification are not readily available to the examiner. If Applicants want these references to be considered, copies must be supplied.

***Specification***

The disclosure is objected to because of the following informalities. Appropriate correction is required:

On Page 22 (line 12), the patent number should read "5,276,637".

The title atop the abstract page is considered extraneous matter and should be deleted.

***Claim Objections***

Claims 37 – 44 are objected to because of the following informalities. Appropriate correction is required:

In order to be consistent with the specification, Claim 37 (line 11), Claim 43 (line 12), and Claim 44 (line 9), "superficial" should read "surficial". The balance of the claims are objected to as containing the same recitation by virtue of their dependency.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27- 44 and 52 – 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Babbitt, et al. The instant specification appears to be a substantial duplicate of that of Babbitt, et al. Thus, it appears that Babbitt, et al disclose each and every feature of the instant claims. Applicants have not demonstrated a chain of continuity of the claimed subject matter from the filing of Babbitt, et al, and have not entered a claim for benefit of earlier filing under 35 U.S.C. § 120.

Claims 37, 38, 41, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Galvanauskas, et al. Referring to Figure 4 and the associated text, Galvanauskas, et al disclose a composite grating for receiving light pulses along an input path and transmitting light pulses along an output path, the composite grating comprising an active material (e.g., KTP), an ordered assemblage of subgratings supported by the active material (see for example claim 25), wherein each respective subgrating satisfies the Bragg condition so as to diffract a respective subbandwidth of light from the input path to the output path, and the subgratings are so configured such that an input optical pulse interactive with the active material along the input path and having a “prescribed” input temporal waveform (*i.e.*, of sufficient bandwidth) triggers an output optical pulse along the output path having a prescribed temporal waveform different from the prescribed input waveform. Galvanauskas, et al anticipates that an arbitrary waveform generator of this type will be used in an optical communications system (Col 2, line 57 – 60). It will be appreciated that the combination with an optical communications system inherently includes a detector.

Claims 37, 38, and 40 - 42 are rejected under 35 U.S.C. 102(b) as being anticipated by R. Kashyap, et al (*Electron. Lett.*). Referring to Figure 3 and discussion, R. Kashyap, et al disclose a composite grating for receiving light pulses along an input path and transmitting light pulses along an output path, the composite grating comprising an active material (e.g., glass co-doped with B & Ge), an ordered assemblage of subgratings supported by the active material, wherein each respective subgrating satisfies the Bragg condition so as to diffract a respective subbandwidth of light from the input path to the output path, and the subgratings are so configured such that an input optical pulse interactive with the active material along the input path and having a "prescribed" input temporal waveform (i.e., of dispersed group delay) triggers an output optical pulse along the output path having a prescribed temporal waveform (dispersion compensated) different from the prescribed input waveform. As evidenced by the plotted waveforms, R. Kashyap, et al anticipate the gratings in combination with a detector of the output waveform.

Claims 27 – 31, 33, 35 - 38, 40 – 44, and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Kashyap, et al (U.S. Patent number 5,530,666). Referring to Figure 2 and the associated text, Kashyap, et al disclose a router (24) responsive to change the routing of data in response to an optical pulse ("header frame") having a prescribed detectable temporal waveform; a composite grating for receiving input light pulses along an input path (10) and transmitting, in response thereto, output light

pulses to the router along an output path (18), the grating comprising an ordered assemblage of Bragg subgratings, the subgratings being configured to trigger a prescribed temporal waveform detectable at comparator (22). At a given workstation, a second input temporal waveform, different from the first, does not trigger the detectable temporal output waveform prescribed for that workstation.

With regard to claims 28, 29, and 40, the output temporal waveform propagates in the opposite direction from the input waveform, and thus partially spatially overlaps therewith.

With regard to claims 30 and 31, the header frame is considered to be a brief pulse of substantially minimal duration. Thus, the selectively reflected header components are also regarded as being of substantially minimal duration.

#### ***Double Patenting***

Claims 27 and 37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,812,318. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are *broader* than the patented claim and can be said to generically dominate the patented claim. Thus, a composite grating which infringes the patented claim necessarily infringes the pending claim.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent

**and to prevent possible harassment by multiple assignees.** See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mossberg, et al (U.S. Patent number 6,292,282 B1) disclose composite gratings for signal routing.

Nuss discloses an apparatus for routing signals in accordance with temporally-encoded packet header data, the apparatus comprising a composite grating.

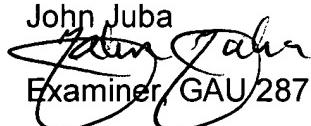
Nuss (*LEOS '96*) discloses an all-optical packet header recognition system.

Nuss, et al (*OPTIC LETTERS*) disclose a composite for correlation of pulse streams.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Juba whose telephone number is (703) 308-4812. The examiner can normally be reached on Mon.-Fri. 9 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on Mon.- Thu., 9 - 5. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, 7724 for regular communications and (703) 308-7721 (notify examiner) for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

John Juba  
  
Examiner GAU 2872

JJ  
November 5, 2001